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## U.S. Development Aid, Its Objectives and Lower-Middle Income Countries

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# **U.S. Development Aid, its objectives and lower-middle income countries**

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**April 2011**

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## **Executive Summary:**

The U.S. is investing billions of dollars in developing countries. U.S. development aid is an essential part of U.S. foreign policy. The objectives laid down by the architects of development aid are wide and range from strategic, economic and social uplift of poor countries to humanitarian assistance to alleviate the suffering of residents. There is a tense political and academic debate about the impacts of development aid funded by the U.S. There are many who believe funds support dictators, while others consider aid to be a real help to fragile economies.

Pakistan is one of the biggest recipients of U.S. development aid but public opinion among Pakistanis is divided over the nature of the aid received. The argument forwarded by some is that the aid supports U.S. strategic interests at the expense of social uplift, economic growth and good governance for citizens. Others argue that, while not perfectly successful, the development aid does help spur the desired development.

The lower middle income countries that have received U.S. development aid are analyzed with cross section panel data of indicators related to economic, social and good governance factors. This data are taken from World Bank Data 2010 and the U.S. aid data are from USAID Green Book 2010. The U.S. aid received is treated as a dependent variable and social, economic and governance indicators are evaluated as explanatory variables.

The results indicate that U.S. development aid is associated with improvements in economic and social indicators, but U.S. aid was not found to be associated with indicators of good governance. It is recommended that, while U.S. should better monitor elements of good governance and proper use of funds when releasing aid, but it is the major responsibility of recipient countries follow good governance practices in order to enjoy the full benefits of foreign funding and attract more funding.

There are many caveats in the study ranging from data limitations to the selection of variables and the reliability of model. Despite these deficiencies, it is believed to be a positive addition to the few existing studies on this subject.

**I: Introduction:** The United States is investing billions of dollars in developing countries.

There is a division among the opinions of different groups about the motivation, objectives and efficacy of U.S. development aid. There are many who think that this aid is a sort of neo-colonialism and is not good for the receiving countries. They think that it is used to support regimes in the developing countries that are friendly to U.S. interests. According to this view, the U.S. often supports dictatorships and the claim is supported by the example of U.S. aid received by several Middle East dictatorships (Alesina and Dollar 2000). On the other hand, there are many who say that U.S. development aid is doing a lot of good for the citizens in developing economies and without the assistance these economies may not thrive. In the presence of such strong disagreements, it seems reasonable to examine the matter dispassionately by examining whether the amount of U.S. development aid received is associated with indicators of social, economic, and political development among low-middle income countries that have received the aid. Only the economic and social portion of the U.S. aid that forms 70% of the overall assistance is assessed. This is net of the 30% share for peace and security, or military assistance (Fig 1).

**Background and definition of aid:** As described by donors, the major purpose of U.S. development aid has been to spur economic development and improve social welfare. U.S. foreign aid is an essential part of U.S. foreign policy. U.S. foreign aid has many objectives and in 2002 these were given as global development, economic growth, poverty reduction and fighting HIV/AIDS (Tarnoff 2011). In addition, the U.S. vows to support peace, democratization, suppress drug trafficking and reduce high rates of population growth. In FY 2010, 39.4 billion dollars was earmarked for different programs and types of aid. This accounted for 1.1% of the

total federal budget and was the highest level since 1985 (Tarnoff 2011)<sup>1</sup>. Total foreign aid was almost 0.2% of U.S. total gross national income, which ranked it third from last among all the donor countries of the world. Table1 and Figures 1 and 2 show the details and distribution of different categories of aid.

Table 1 U.S. Aid by Objective and Program Area: FY2010

<b>Aid Objectives and Program Areas</b>	<b>In million dollars</b>
<b>Peace and Security</b>	<b>10,380.0</b>
<b>Investing in People</b>	<b>10,929.6</b>
<b>Governing Justly &amp; Democratically</b>	<b>3,644.2</b>
<b>Promoting Economic Growth &amp; prosperity</b>	<b>5,212.8</b>
<b>Humanitarian Assistance</b>	<b>4,975.8</b>
<b>Total</b>	<b>35,142.4</b>

**Source:** USAID and Department of State budget documents; ForeignAssistance.gov.

**Notes:** Figures encompass State and USAID appropriations only, including supplementals and Iraq and Afghanistan programs.

Afghanistan, Israel, Pakistan, Egypt, and Haiti were highest recipients of aid in 2010. A large portion of U.S. foreign aid is tied aid and in 2008 only the bilateral aid has 25% of its portion as tied aid. The tied aid means that the recipient of aid is duty bound to procure goods and services from the donor country. This increases the cost of goods and services by 15-30% in general and 40% in case of food purchases. The multilateral aid procurement of goods and services from the U.S. increases its share of contributions in that type of aid. The U.S. hopes to receive direct benefits of its sale of goods and services in the future along with indirect benefits from development of future markets in these economies. If there is economic development then the U.S. and the receiving countries would become even bigger partners in trade.

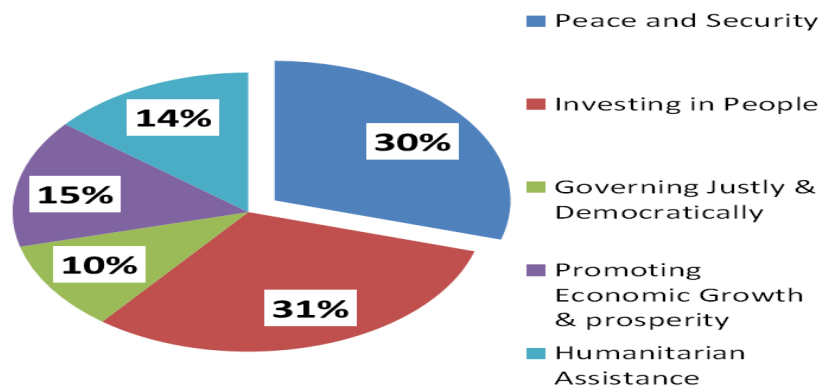
## II: Literature Review:

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<sup>1</sup> There is a discrepancy in the figures because the total aid is mentioned for 2010 as 39.39 billion USD but its break up adds to 35.14, but this is the data that I have used from the Tarnoff 2011 article and sources are also mentioned.

**Impact of U.S. Development Aid:** There has been an ongoing debate about whether development aid is associated with positive or negative effects on the social, economic and governance indicators of the aid recipients. There is not a great deal of literature available on U.S. aid and its pattern of outflows to recipient countries. I have discussed mostly foreign aid in general and priorities of decision makers at the time of allocation. A summary of both sides of that debate is presented below.

Figure # 1. State/USAID Assistance by Objective and Program Area: FY2010.



Source: U.S. Department of State, Summary and Highlights, International Affairs, Function 150, FY2011; House and Senate Appropriations Committees; CRS calculations.

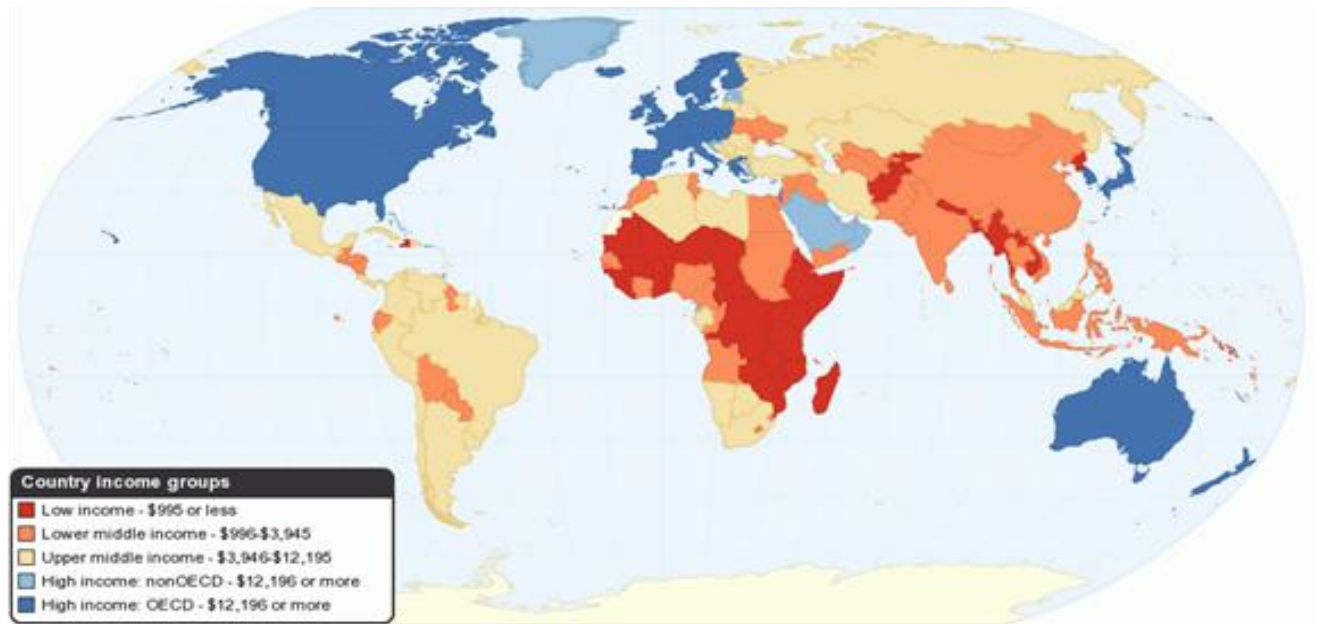
**Positive View of Foreign Development Aid:** Those who believe that, while not perfect, foreign aid generally supports social and civil development in receiving countries offer several arguments. A country that is democratizing will receive a 50% increase in aid (Alesina and Dollar 2000). Jeffrey Sachs, Joseph Stiglitz, and Nicholas Stern give the example of countries

like Botswana, Indonesia, Korea, Tanzania and Mozambique which have received more foreign aid when they made improvements in social, economic and good governance indicators. It is noted that poor countries receive more aid because they have few resources and the aid helps fill the gap (McGillivray 2009). Aid has a positive relationship with growth in some countries but no such relation exists between measures of health, education and income distribution. Aid is a ‘conditional’ impact; having greater effect in countries having civil liberties and less effect in corrupt and dictatorial regimes. Aid given in times of disaster may be greater in volume but less productive due to economic shocks. Levy (1988), is a strong supporter of external economic aid to spur economic growth. Foreign aid was found to be more sensitive to political openness; while foreign direct investment was found to be more responsive to economic openness (Alesina and Dollar 2000). Lumsdaine (1993) paints an ideal position in which “moral vision” guides the allocation of foreign aid. Rajan (2007) concluded that multilateral aid is less political and should have a positive impact. He analyzed cross country panel data and found no robust evidence for a relationship between growth and aid. A recent study concluded that foreign aid helps boost investment and savings and can boost further growth if proper monetary and fiscal policies are adopted, loans and debt are discouraged, and investment is encouraged (Chaudhry 2009). Poor regions like Africa and South Asia, and countries like Congo, Haiti, Papua New Guinea, and Somalia received huge amounts of aid but even large amounts of aid did not reduce their poverty (Manasse 2009). There is sharp contrast in the motivational factors of multilateral and bilateral types of aid (Alesina and Dollar 2000). Japan’s aid is influenced by the voting patterns at the UN, meaning that those who vote in line with Japan get more aid.



Figure 2 is a map showing the classification of different countries according to income level.

The orange colored area shows the lower middle income countries that are included in this analysis.



Source: <http://chartsbin.com/view/e2x>

Table 2: Names of countries included in the analysis

#	Country	#	Country	#	Country	#	Country
1	Angola	14	Micronesia	27	Moldova	40	SãoTomé&Principe
2	Armenia	15	Georgia	28	Maldives	41	Swaziland
3	Belize	16	Guatemala	29	Marshall Islands	42	Syria
4	Bolivia	17	Guyana	30	Mongolia	43	Thailand
5	Bhutan	18	Honduras	31	Nigeria	44	Turkmenistan
6	China	19	Indonesia	32	Nicaragua	45	Timor-Leste
7	Côte d'Ivoire	20	India	33	Pakistan	46	Tonga
8	Cameroon	21	Iraq	34	Philippines	47	Tunisia
9	Congo, Rep.	22	Jordan	35	New Guinea	48	Tuvalu
10	Cape Verde	23	Kiribati	36	Paraguay	49	Ukraine
11	Djibouti	24	Sri Lanka	37	Sudan	50	Uzbekistan
12	Ecuador	25	Lesotho	38	Senegal	51	Vanuatu
13	Egypt	26	Morocco	39	El Salvador	52	Yemen, Rep

**Negative View of Foreign Development Aid:** There are also people who believe that U.S. aid flows to autocratic and corrupt governments at the expense of social and civil development.

Burnside and Dollar (2000) say that, although foreign aid is positively associated with economic growth and good policies, the allocation of aid is not related to the good policies. There are many studies that say that more aid, irrespective of the policy environment, will have positive impacts. Schraeder, Hook and Taylor (1998) deny any idealism, in their study of Africa, in the motivation of donors. They suggest position in the world power game, strategic designs and relations with former colonies as motivating factors for aid. U.S. aid was said to be influenced by strategic interests in the Middle East. Bourgingnon and Sundberg (2007) tag strategic aid as “bad” aid because it is not expected to give good results. Strategic aid means military aid and is mostly determined by security related issues with no concern for public welfare. This may be due to bad policies and institutions that are maintained by the recipient governments. Foreign aid is tested through strategic cost benefit analysis and is driven by donor interests rather than the good it would be expected to do for a recipient country (Afzal 2010). During the cold war aid was more strategic and driven by donor interest and bilateral in nature. After the cold war, a tendency toward good development policies was fostered for poor countries, but the share of aid to them declined (Burnside & Dollar 2000). Alesina and Dollar (2000) found that a “closed” former colony will get double amount of aid as compared to an “open” former colony. There is empirical evidence that corrupt governments receive more aid and increases in aid do not reduce corruption (Alesina and Weder 1999).

Fair (2009) argues that billions of dollars have been sent by the U.S. to Pakistan when there were non-democratic governments and that the aid has not helped in Pakistan’s economic development or creation of peace and conflict reduction. Fair concludes that’s why there appears

to be growing distrust of the aid among Pakistanis. An example of political motives behind U.S. aid to Pakistan can be seen in this comment.

***“On the eve of the 9/11 terror attacks, Pakistan teetered on the brink of pariah state status. After President Musharraf chose, under considerable pressure, to join the U.S.-led Global War on Terrorism, the Bush administration waved sanctions related to the nuclear tests and military coup. At a September 24 press briefing, State Department spokesman Richard Boucher explained this change of course —We intend to support those who support us. We intend to work with those governments that work with us in this fight [against terrorism]. The results were dramatic. In FY 2001, all Direct Overt U.S. Assistance to Pakistan totaled less than \$90 million with food aid comprising \$86 million and \$4 million in limited security-related assistance. There was no economic assistance. In FY 2002, Pakistan received \$2.1 billion, including \$665 million in economic aid. Clearly Pakistan did not become needier; rather, Pakistan became important within the political contexts of the war on terror (Fair 2009).”***

Sarantis (2008) argues that foreign aid has negative effects on democracy because it weakens accountability, softens budget constraints and lowers pressures for local accountability because revenues are not coming from taxes paid by citizens. When the aid comes from a foreign source then consumption of the recipient countries increases (Burnside and Dollar 2000). The ruling elite do not rely on taxation at home because when taxes increase people will demand for their rights. Crawford (1997) concluded that aid sanctions are ineffective and that setting conditions on receiving aid have failed to change policies by the aid recipients. The trend of increasing aid to new democracies is also said to be harmful (Alesina and Dollar 2000). The damaging effects of aid on democracy can to some extent be neutralized if a liberal economic policy is introduced prior to initiation of a foreign aid program. This means that if more open economic policies are adopted by the recipient country there will be more returns from the assistance (Sarantis 2008). Open policies mean transparency in transactions (Burnside and Dollar 2000).

UN voting patterns are also said to play a role in decisions about giving aid to different countries. If someone votes in line with major donor countries, they will not only give that country priority

in bilateral aid but also support requests in the decision making body for multilateral aid from the IMF and World Bank. There is evidence that the IMF has given aid to countries when they did not qualify under the criteria set by IMF. Examples of such countries include Zaire and the Philippines during the Cold War, and Russia, Ukraine, Egypt, Pakistan and Turkey during the 1990s. This is relevant to U.S. aid because when someone voted in line with the U.S. in matters before the UN, that country received more multilateral aid because in IMF and World Bank the, United States has great influence in gaining a voting majority<sup>2</sup> (Carter 2010). Some argue that the U.S. gives aid to autocracies and avoids punishing them (Bueno de Mesquita et al., 2003), so that they support policies desired by the U.S. There are some autocracies in Middle Eastern countries supported by U.S. (Schraeder, Hook and Taylor, 1998). The argument of some researchers states the reason behind this generosity towards dictators is that it is less expensive to get them in line because they don't have resort to general public approval for adoption of controversial policies (Bueno de Mesquita and Smith, 2007). One author asserted that democracies are more likely to be punished than dictatorships by the U.S. (Carter 2010). The reason given for this tendency is that "democratic leaders have electoral incentives to oppose U.S. policy" and when democracies become more developed they become more resistant to the pressure of the United States. (Carter 2010). These are some very strong assertions by these studies and one may agree with them or disagree with them because some studies can be found to support of both sides of the argument.

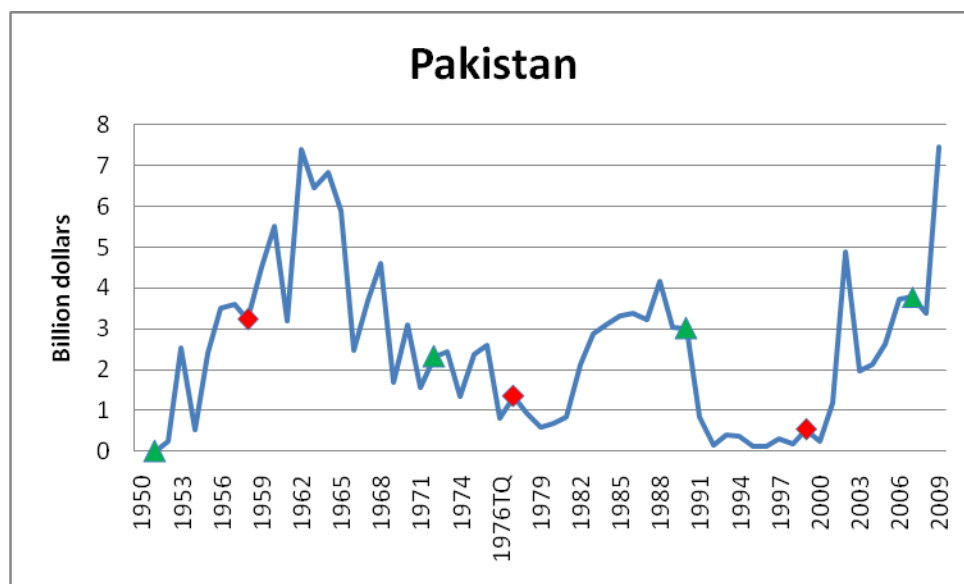
**III: Pakistan: A Case Example of Development Indicators:** In order to explain the development indicators considered in the analysis they are shown for a specific country. Pakistan was chosen for this example because of the author's specific knowledge of its history.

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<sup>2</sup> In order to make a decision in IMF, it requires 85% vote. U.S. has 20 % of its votes, so no decision can be made without the consent of U.S. This is an implicit veto power.

Pakistan and U.S. relations are a very complicated affair. There have been many ups and downs between the countries, and currently appear to be based on mutual suspicion. Figure 3 shows that the aid dictators received was sometimes higher than that received by democratic governments. The red diamonds show a takeover by a military regime and the green triangles stand for the year when the democratic government resumed. Pakistan has received a lot of U.S. aid, accumulating to billions of dollars. The current analysis considers the years 1981-2007 and during that period Pakistan has democratic governments; only from 1989-1999. The decade of 1990s in Figure 3 shows that aid received during this decade was limited. There may be many reasons to explain this trend; for example, after the culmination of cold war U.S. aid declined all over the world but then increased after 9/11 and the following decade.

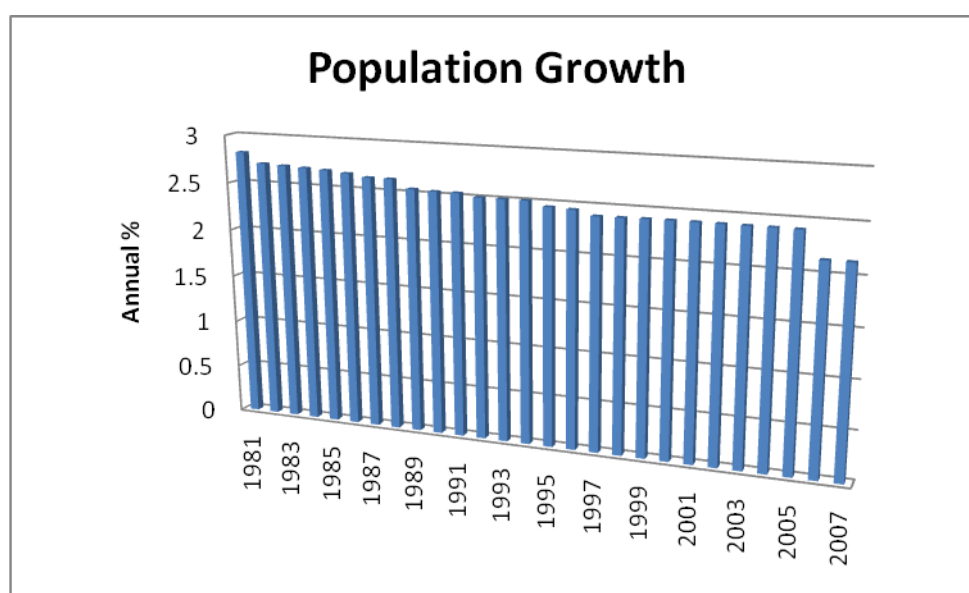
Figure 3. The trend of USAID to Pakistan during its whole history



Source: USAID Green Book Data 2010. The red diamonds show the taking over of a military regime. The green triangles stand for the year when the democratic system was restored.

Figure 4 shows that annual population growth in Pakistan has remained high during the last three decades but it has shown a slight reduction in recent years (2002-2007) and in these years U.S. aid inflow was higher than normal. So an correlation might be hypothesized. The reasons given for the small decline in population are religious opposition, low status of women and lack of education.

Figure 4. Population Growth



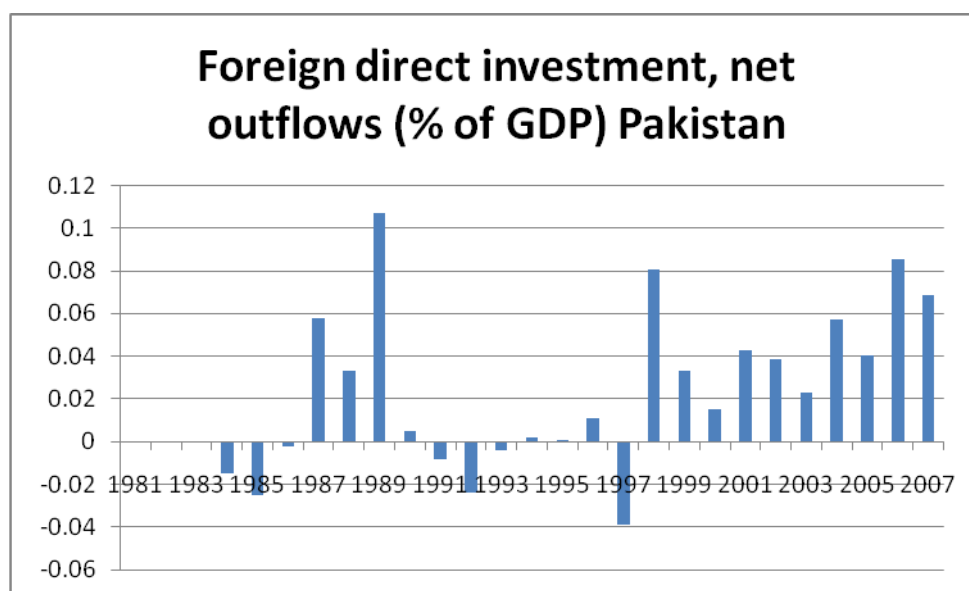
In Pakistan’s history, the decade of 1990s is called a “lost” decade because the economy was in very bad shape during those ten years. But the interesting thing is that it was also the decade in which Pakistan witnessed four different short-lived democratic governments, equally divided between Benazir Bhutto, first women prime minister of any Islamic country, and Nawaz Sharif, for two terms each.

Figure 9 (Appendix I) shows the trend in the agriculture sector. It is a trend of steady increase. Pakistan’s economy is mostly based on agriculture and almost 65 percent of population is directly or indirectly engaged in the agriculture sector. Most of the industrial inputs and capital

are also provided by the agriculture sector. Pakistan has always tried to attract foreign investors and provided many incentives like tax exemption, but this sector has always remained volatile. However, during the last decade the sector has shown some consistency, as can be seen from

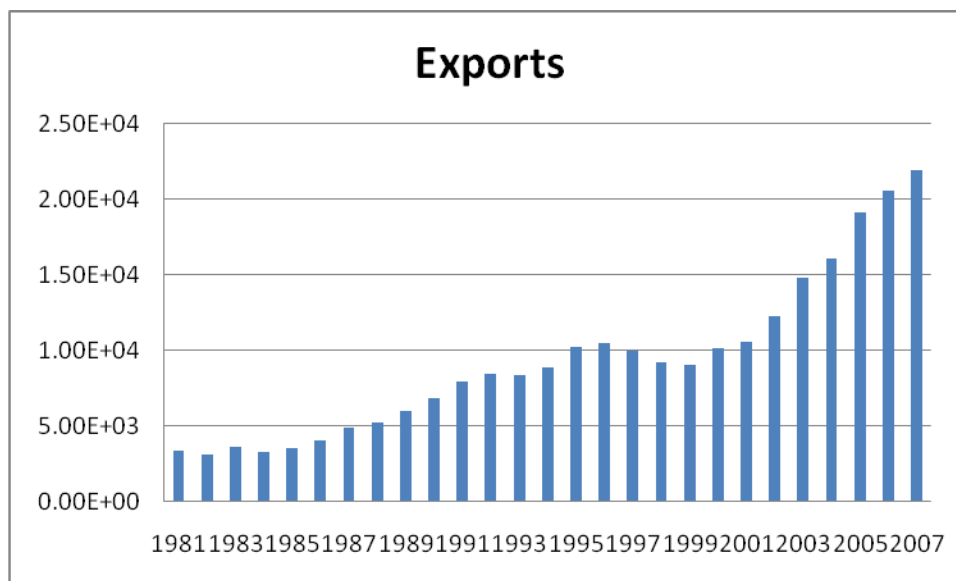
Figure 5.

Figure 5 . Foreign Direct Investment



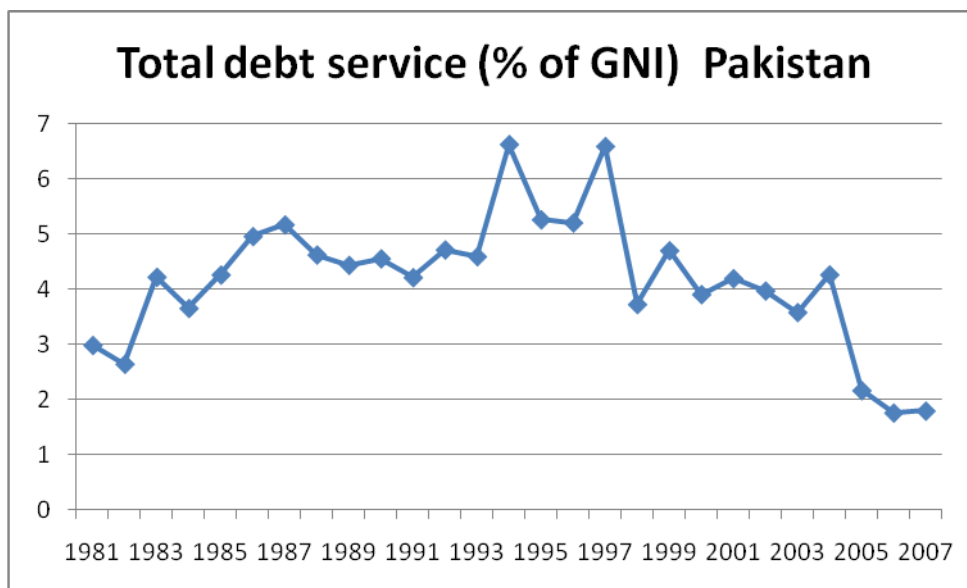
Exports are mostly based on agriculture products, textiles and sports items. Despite efforts by different governments exports have remained very low. The last decade has shown some improvement due to relaxation of quotas in the EU countries (Figure 6). External debt is a very serious issue and Pakistan now has external debt more than 60% of its GDP and this has resulted in debt service sometimes reaching 7% of GNI, which is higher even than the poorest countries in Africa (Figure 7). There are many other indicators related to economic development, social uplift and good governance in Pakistan that can be examined in the appendix. These indicators show varying trends. If we compare the volume of U.S. aid receipts (Figure 1) with other indicators, it shows that economic and social indicators show a slight relationship but the good governance indicators (Figures 16-21 in Appendix I) have no such apparent relationship.

Figure 6. Exports of goods and services in constant U.S. dollars (2009)



Examination of a single case does not support the existence or lack of a relationship, but the questions raised set the stage for the questions to be addressed through data analysis in the next section.

Figure 7. Debt Servicing





#### IV: Association between U.S. Aid and Development Indicators:

The U.S. Agency for International Development Primer lays out a “summary of characteristics of assistance that achieves development objectives, including economic growth, democracy and good governance, successful social transition.” In order to analyze this statement with respect to different development indicators of economic growth, democracy and good governance and social inclusion, data was obtained from the World Bank Data available online. The years of analysis are 1980-2007. Data regarding annual U.S. development aid to each country for each year of the analysis were obtained from USAID Green book edition of 2009.

Table 3 List of variables

<b>Economic indicators</b>	<b>Economic indicators</b>	<b>Economic indicators</b>	<b>Social Indicators</b>	<b>Governance Indicators</b>
Current Account Balance	GDP	Public and Publicly Guaranteed debt	Life Expectancy at birth	Control of Corruption
Net trade in goods and services	Crop Production Index	Total reserves in months of imports	Population above 65	Government Effectiveness
Direct Investment	Food Production Index	CPI	Population Growth	Political Stability and absence of violence/terrorism
Industry				
Grants	Direct investment (% of GDP)	Inflation		Regulatory quality
Exports	Current Account Balance (% of GDP)	Government Consumption		Rule of law
Principal repayments on debt	External debt ( % of GNI)	Total Debt service ( % of GNI)		Voice and accountability

Three different classes of indicators are considered as explanatory variables and USAID is the dependent variable. The explanatory variables include economic, social, and governance indicators as major categories. The data for all the explanatory variables is from the World Bank and is the latest data that is open for public use. Although there is much missing data among various indicators, there is still sufficient data to make the analysis possible. I have used lower middle income countries for the analysis because they are major recipients of the USAID and more data is available for them. Initially, I intended to include the low income countries but most of the data for the above mentioned variables was missing, so in the absence of many indicators the analysis may have become biased. The names of the countries used in this analysis are given in the Table 2. They are 56 in World Bank data and definition but for 4 of them data was not available showing receipt of U.S. aid during the period under study. These 4 countries are Vietnam, Kosovo, Gaza and Samoa. The location of these countries can be seen on map in Figure 2. The orange color represents lower middle income countries. The majority of these countries belong to the two continents of Asia and Africa.

The three categories of the variables are intended to represent the major objectives of USAID as shown in Table 1 and Figure 1. My expectation is that when a country is doing well on governance indicators, USAID is predicted to be larger. In the same manner, when social indicators show positive progress, such as when life expectancy increases, USAID be found to be higher. In the same manner, if the population growth declines it would be expected to be associated with more aid. As far as the economic indicators are concerned, they will have different responses in different cases. I have used cross section time series panel data for this analysis in order to control for the characteristics of countries that do not change over time. The country has been used as a control variable for the fixed effects. I used robust regressions to find

the relationships of the indicators with the dependent variable of USAID. I have also used factor analysis in order to address collinearity among independent variables and also to find the collective impact of various categories of explanatory variables on the dependent variable. An important thing about the data is that for the economic and social indicators, and USAID, data is available from 1981-2007 (27 years), while for the governance indicators data is only available for the years 1996, 1998, 2000, 2002-2007 (total of 9 years)

**V: Results:** The results of regressing the whole list of economic and social indicators on USAID with robust standard error are shown in Table 4. We find three significant results for industry, GDP and CPI. The first one is positive and can be interpreted as the association between increases in the industrial sector of lower middle income country and USAID flow increasing in order to help boost production so that the country can stand on solid economic footing and can be a partner in trade in future. But it can be otherwise as well because when industry is increasing then the lower middle income country could become more self-reliant such that aid flow would decline. GDP has the expected negative sign because an increase in GDP means that less aid is needed. CPI also has negative sign implying that an increase in CPI is associated with aid reductions. None of the social indicators show significant results in this model. The negative sign of population growth is as expected because we have already assumed that an increase in population is not in line with the family planning and population control objectives so USAID would be reduced when these policies fail to produce results.

Table 4 USAID is regressed on variables in Table 3 with robust standard error less governance

USAID	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Current Account Balance	.2730161	0.248576	1.10	0.273	-0.2163453	0.7623774
Net trade in goods and services	-.4420412	0.2817353	-1.57	0.118	-0.9960544	0.111972
Direct Investment	.2516115	0.1854854	1.36	0.176	-0.1131327	0.6163558
Grants	1.8172	1.908803	0.95	0.342	-1.93633	5.57073
Exports	.0284334	0.0508662	0.56	0.577	-0.0715914	0.1284582
Principal repayments on debt	.3463147	0.2538266	1.36	0.173	-0.1528179	0.8454474
Industry	.2038093	0.0956953	2.13	0.034	0.0156311	0.3919875
GDP	-.1302536	0.0590791	-2.20	0.028	-0.2464286	-0.0140787
Crop Production Index	.031015	0.0276766	1.12	0.263	-0.02341	0.0854392
Food Production Index	.0752275	0.0642469	1.17	0.242	-0.05111	0.2015647
Direct investment (% of GDP)	2.873533	1.612822	1.78	0.076	-0.29797	6.045036
Current Account Balance (% of GDP)	.3735517	0.4812026	0.78	0.438	-0.5727	1.319804
External debt ( % of GNI)	- .0004539	0.0461856	-0.01	0.992	-0.09127	0.0903669
Total Debt service( % of GNI)	.2986428	0.3522273	-0.85	0.397	-0.99127	0.393988
Public and Publicly Guaranteed debt	.3901826	0.3629276	1.08	0.283	-0.32349	1.103855
Total reserves in months of exports	.6183692	0.9629416	0.64	0.521	-1.27519	2.511928
CPI	-.1311258	0.0499825	-2.62	0.009	-0.22941	0.0328385
Inflation	-.0036024	0.0075199	-0.48	0.632	-0.01839	0.0111849
Government Consumption	.317482	0.4972018	0.64	0.524	-0.66023	1.295195
Life Expectancy at birth	.6168457	0.3861569	1.60	0.111	-0.14251	1.376197
Population above 65	-1.046554	2.683626	-0.39	0.697	-6.32372	4.230611
Population Growth	-4.640577	2.65449	-1.75	0.081	-9.86045	0.5792948
Constant	-23.19401	28.31656	-0.82	0.413	-78.8766	32.48856
sigma_u	15.98737	(fraction of variance due to u_i)				
sigma_e	19.528221					
rho	.40128271					

As far as the Governance indicators are concerned, when they were included, they did not show any significant results<sup>3</sup>. Moreover, when they were included, the other economic indicators previously having significant results also became insignificant (Table 1 Appendix II). I have observed two important things here. One is the strong impact of governance as a factor and second the presence of collinearity in many variables. So I have created factors in order to avoid collinearity and also to find whether other variables that are not significant individually can show some significant results as a factor, as it was seen in the case of governance. First I want to show the collinearity among different variables. Table 5 Correlation in variables

<b>Variable</b>	<b>VIF</b>	<b>1/VIF</b>
Industry	189.76	0.00527
GDP	116.31	0.008598
Current Account Balance	107.18	0.00933
Grants	67.9	0.014728
Exports	66.79	0.014971
Direct Investment	13.89	0.072009
Principal repayments on external debt	6.8	0.147103
Population above 65	3.11	0.321368
Population growth	3.09	0.323675
Total Debt service( % of GNI)	2.81	0.356196
Public and Publicly Guaranteed debt	2.66	0.376267
food	2.48	0.402697
CPI	2.13	0.469695
Total reserves in months of exports	1.88	0.531242
Life expectancy at birth	1.63	0.615137
External debt ( % of GNI)	1.6	0.625475
Consumption of government	1.28	0.77967
Grants	1.26	0.792871
Current Account Balance (% of GDP)	1.26	0.793307
Crop production index	1.26	0.795821
Inflation	1.03	0.971624
Mean VIF	28.39	

<sup>3</sup> The t-test results for Industry, GDP and CPI are 0.49, -1.05 and .0.01 respectively (see table 1 appendix 1).

This Table 5 shows that first six variables are highly correlated to each other. I have created some factors that are given in Table 6.

Table 6 Factors created to further analyze the data

<b>Governance</b>	<b>Economic Health</b>	<b>Healthcare</b>	<b>Agri- Sector</b>	<b>Deficit Financing</b>
Control of Corruption	Industry	Life Expectancy at birth	Food Production Index	External debt ( % of GNI)
Government Effectiveness	GDP	Population above 65	Crop Production Index	Total Debt service ( % of GNI)
Political Stability and absence of violence/terrorism	Current Account Balance	Population Growth		
Voice and Accountability	Grants			
Regulatory quality	Exports			
Rule of law	Direct Investment			

Table 7 shows the results using the newly created Economic Health factor and Healthcare factor while all the other variables were the same as above. Total debt service is significant but the sign is negative. That means that when a country's debt service increases by one percent, USAID decreases by 0.42 billion dollars. The Food Production Index also shows significant and negative results. It can be interpreted that, as a country rises on the food production index by one point, it will lose USAID by 0.17 billion dollars. This is very logical because when a country gets self-sufficiency in food it will lose the food aid element of USAID. In the same manner, if a country shows good results on the healthcare factor its share of aid will see a huge increase up to 8.73 billion dollars. The external debt variable has a negative sign and its p-value 0.065. It means that these two variables on debt are related to USAID significantly at the 0.1 level.

Table 7 USAID is regressed on Economic Health and Healthcare factors less Governance factor

USAID	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Economic Health	0.333608	0.281612	1.18	0.237	-0.21918	0.886392
Total Debt service( % of GNI)	-0.42567	0.170695	-2.49	0.013	-0.76073	-0.09061
Total External debt (% of GNI)	-0.02333	0.01264	-1.85	0.065	-0.04814	0.001476
Food Production Index	-0.17258	0.063765	-2.71	0.007	-0.29774	-0.04741
Crop Production Index	-0.00117	0.009215	-0.13	0.899	-0.01926	0.016916
Healthcare	8.733833	4.090916	2.13	0.033	0.703651	16.76402
_cons	31.17832	6.803378	4.58	0	17.82376	44.53287
sigma_u	14.50324	(fraction of variance due to u_i)				
sigma_e	20.04826					
rho	0.343544					

Table 8 has all the same variables as in theTable 7 with only the addition of the Governance factor. The debt service and total external debt variables remain significant with varying degrees and have similar negative signs as above but the food index loses significance.

Table 8 USAID is regressed on Economic Health and Healthcare factors with Governance factor

USAID	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Economic Health	-0.34497	0.335414	-1.03	0.305	-1.00547	0.315525
Total Debt service( % of GNI)	0.533191	0.29006	1.84	0.067	-0.038	1.104378
Total External debt (% of GNI)	-0.10516	0.042413	-2.48	0.014	-0.18868	-0.02164
Food Production Index	-0.03495	0.087428	-0.4	0.69	-0.20711	0.137212
Crop Production Index	-0.03125	0.02734	-1.14	0.254	-0.08509	0.022586
Healthcare	15.88104	10.25943	1.55	0.123	-4.32184	36.08393
Governance	12.79862	9.443043	1.36	0.176	-5.79663	31.39388
_cons	14.96796	10.85005	1.38	0.169	-6.39798	36.33389
sigma_u	25.80521	(fraction of variance due to u_i)				
sigma_e	24.38763					
rho	0.52822					

Table 9 (Appendix II) shows the results from the last two factors created by combining the debt service and total external debt for deficit financing and food index and crop index for

agricultural-sector factor. Here we use all the factors except Governance. The result shows that once again only deficit financing is important and it also retains its negative sign. This shows that USAID is related to debt factor whether incorporated singularly or as a factor.

In the last Table 10 (Appendix II) of our analysis we see the result from the similar variables but with the governance factor as well. The result is very interesting, it shows that the economic health factor is now significant and its sign is negative. It shows that USAID is explained by the economic factors in a better manner. Nowhere in the whole analysis is there a significant relationship between good governance and USAID. Although on the face of it seems a bit unwelcome outcome but still it can be explained that the limited data on the governance factor may be one reason that it is not significant. Moreover, we can also refer to our earlier observation when examining the different indicators for Pakistan where it did not appear that governance indicators like control of corruption, government effectiveness, voice and accountability, rule of law, political stability/absence of terrorism etc. (Tables 16-21 Appendix I) had a relationship with USAID.

## **V: Recommendations:**

Keeping in mind these results, one can give recommendations to both the U.S. administration as well as the aid recipient countries.

1. The recommendation for the U.S. administration is that USAID is going in the right direction as far as economic and social factors are concerned. But the good governance factor needs greater attention from policy makers. Findings may partially support the claim that USAID goes to dictatorships that have no concern for good governance and the political and human rights of the people. This may be due to the strategic interests of the



U.S. which play a major role when deciding to release USAID to recipient countries. One cannot deny the fact that strategic interests of a donor country are important, but still to achieve those aims should never be the single consideration in granting aid. There should be some tradeoffs and in case choice is between democracy and dictatorships, one can safely say that a democratic government, while difficult to deal with, is likely to give better results.

2. Another recommendation is that closer scrutiny of the aid be required so that funds not go into the pockets of military generals, politicians or bureaucrats leaving the problems of regular citizens unaddressed. . This would improve one of the governance indicators, the control of corruption.
3. The U.S. is at this moment the top contributor of development aid. Still, its total contribution equals only 0.2% of its gross national income. If this contribution is increased to 1% level, as envisaged in the millennium development goals (MDG)<sup>4</sup>, then the U.S. can engender much more economic, social and good governance development.

The recommendation for recipient governments, such as Pakistan, reflect the fact that the available data indicates that billions of dollars of U.S. aid does not appear to have produced all the desired results, especially on indicators of good governance.

1. There is need to establish and empower institutions that can closely monitor the use of USAID in future so it can achieve its maximum effect. After the restoration of

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<sup>4</sup> In the millennium development goals it was envisaged share of developed countries for foreign aid will be increased up to 1% of their GNI. My recommendation emanates from that proposal, because although US is the biggest contributor in dollar terms but it is at the number 3 from lowest in GNI terms. Scandinavian countries are at the top with over 0.75 % of GNI share and Saudi Arabia has 0.69 % contributions for foreign aid.

democracy in the country for the last 3 years, the people of Pakistan have not seen much improvement in the indicators. There should be a serious review of how the aid was spent.

2. The one consistent result found in this paper is that USAID is most closely associated with the economic growth indicators<sup>5</sup> but to expect that it will be able to strengthen public institutions and good governance may be expecting too much. Each domestic institution should work vigilantly within its constitutional parameters to protect democratic transparency and accountability. A free press and a free judiciary are the most effective methods to enhance good governance indicators.
3. Like many lower middle income countries, Pakistan has a huge external debt, and also a large debt servicing burden that it has to address quickly; because without addressing this issue future inflows of aid, and even foreign direct investment, will likely remain very low.
4. USAID cannot be seen as a panacea for all ills. Better management and self-reliance in revenue generation is required. That can become weakened if a country is fed for a long time on foreign aid. Pakistan is can be seen as an example, where the taxes are paid by only 1.5% of the total population (Daily Dawn Jan 7, 2011). There are fewer than 2 million tax payers in a population of 180 million.

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<sup>5</sup> Significant results from table 1 for industry, GDP and CPI, from table 7 for Food Production Index and total debt servicing and from table 8 for total external debt are evidence in this regard.

## **VI: Caveats:**

There are many caveats in the present study. It is a new model and the variables used in this model may not be the optimal factors to use in analyzing USAID. The data are very limited and a lot of missing data points make the results vulnerable to some misinterpretations.

The USAID data used year 2009 as a base year to convert it to constant dollar while the World Bank data has used year 2005 as base year to convert its data into a constant dollar. The World Bank data was converted by using its own atlas method. This may also be regarded as a caveat and it may affect the output to some extent.

## **VII: Conclusions:**

Overall, the results in this study are not very encouraging in the case of good governance and democracy indicators. But the economic development indicators are encouraging in the sense that they are showing significant relationship between aid decisions and the economic condition of a country. The debt situation of a country seems to play an important role in decisions about aid distribution. In future it will likely play an even more important role in the future because there is growing concern within the U.S. itself about its own 14 trillion dollars debt.

While there are very few studies of U.S. development aid that can provide guidance for the analysis, there are studies of multilateral aid that could be instructive. U.S. development aid is an important portion of overall aid, accounting for the largest share from all donor countries. It could be instructive to compare and contrast the results of the varying effects of aid from other donor countries with the U.S. development aid in future research. Whether USAID plays a decisive role in the allocation of other grants either multilateral or bilateral, is an empirical question that should be analyzed?

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## IX: Appendix I

Figure 8 Aid Program Composition, FY2010.

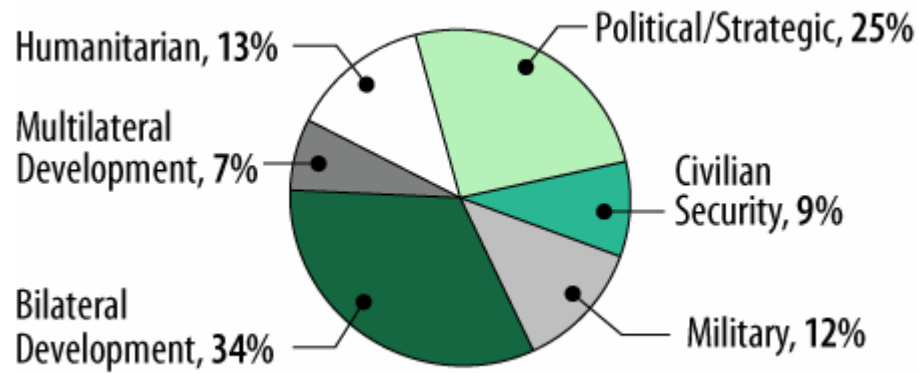


Figure # 9.

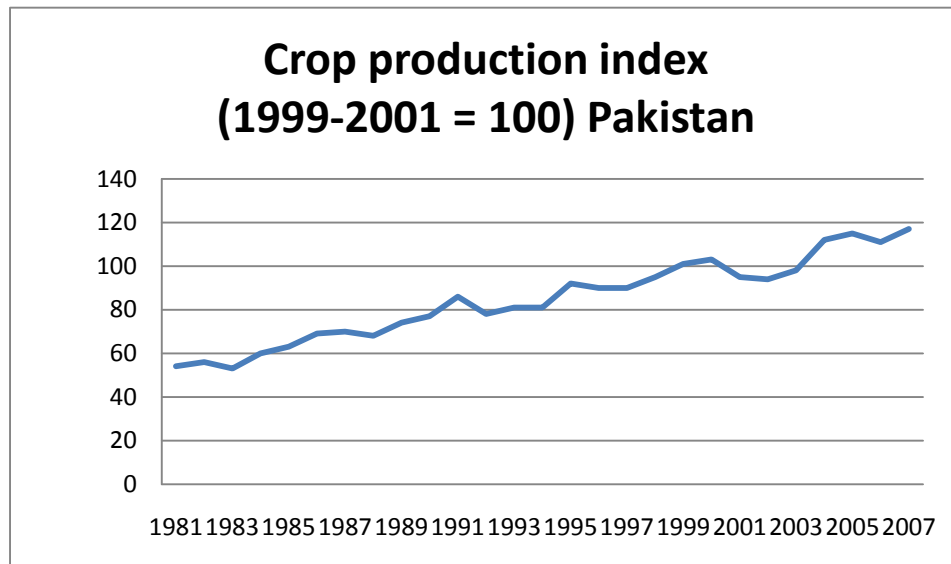


Figure 10. Total Reserves

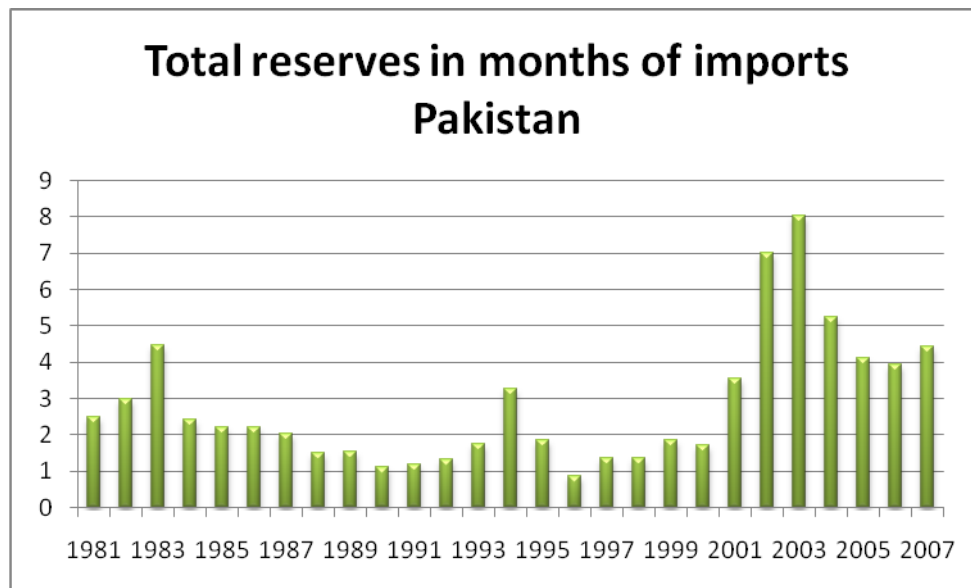


Figure 11. Price Hike

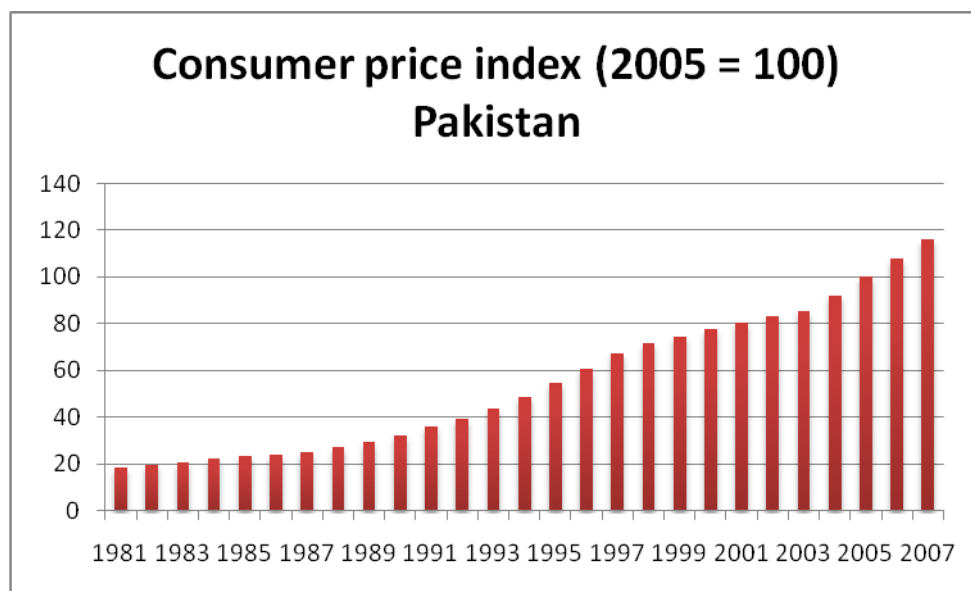




Figure 12 Inflation

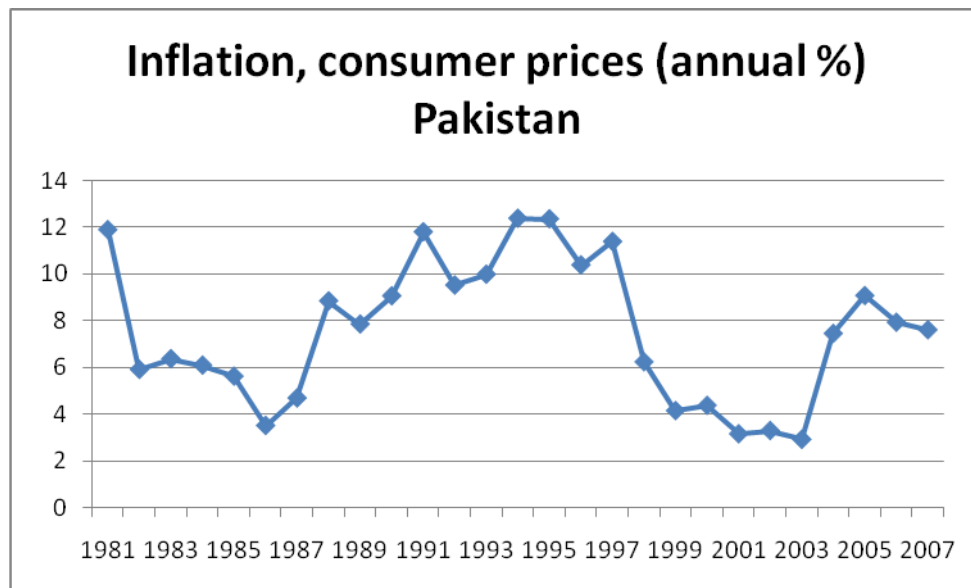


Figure 13 Industry

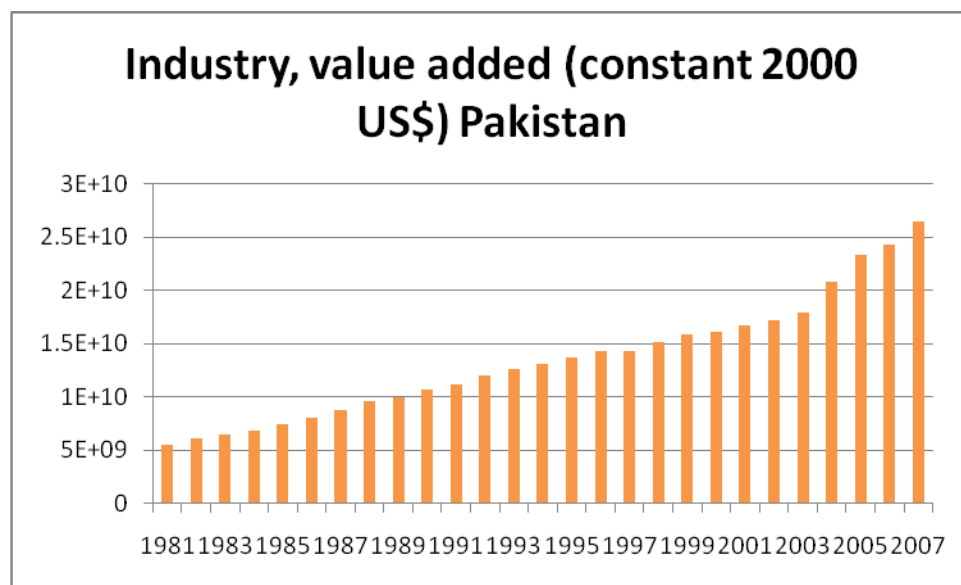


Figure 14 GDP

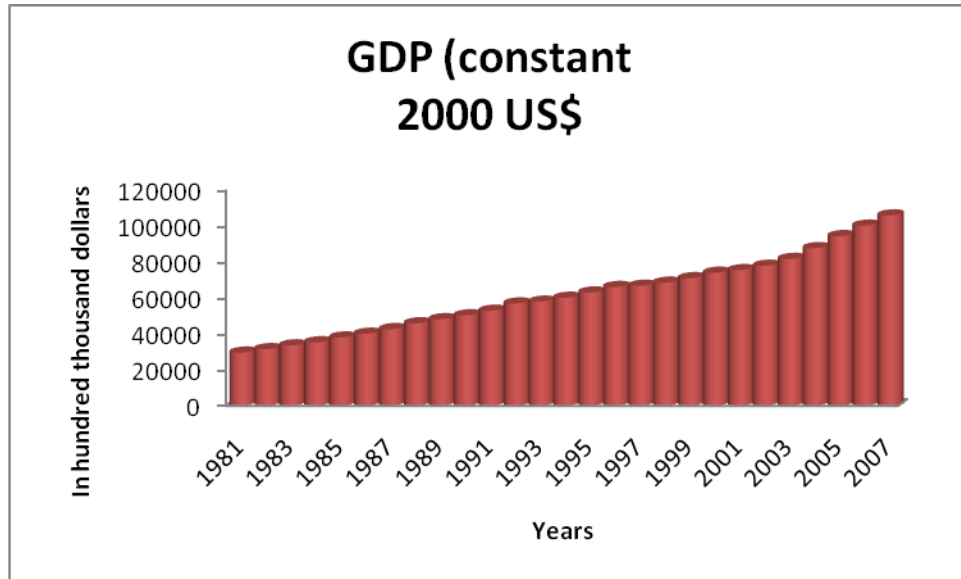


Figure 15 Life Expectancy at birth

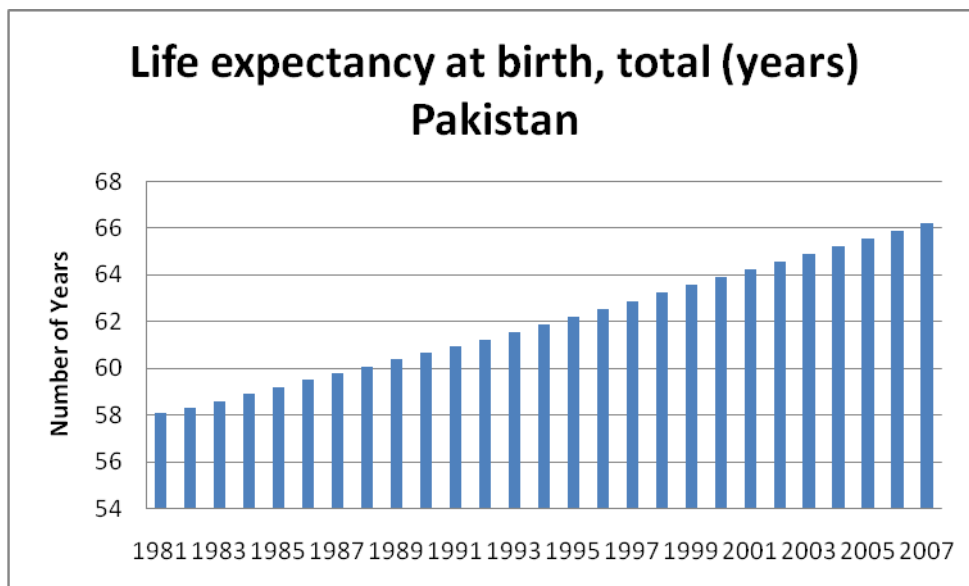


Figure 16 Control of Corruption: Percentile Rank

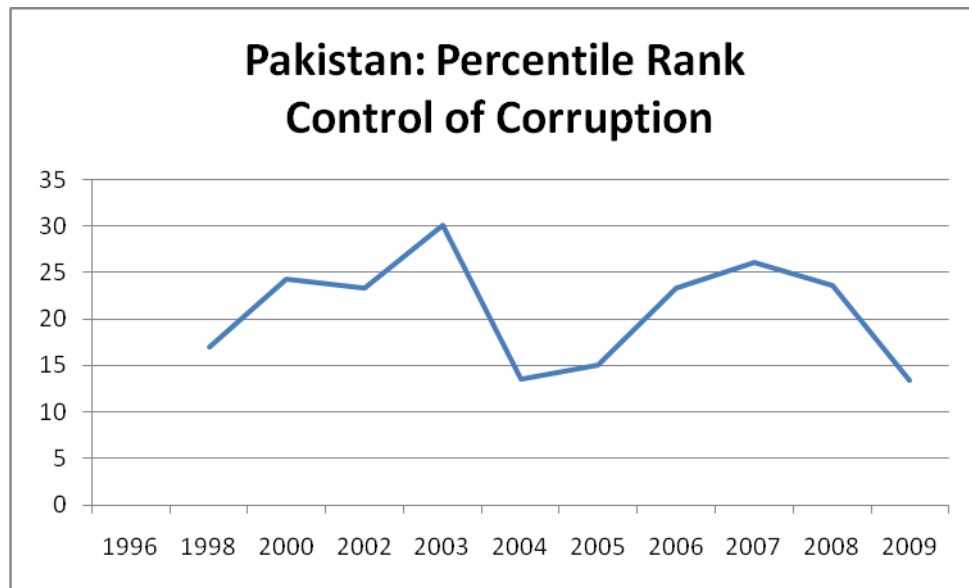


Figure 17 Government Effectiveness: Percentile Rank

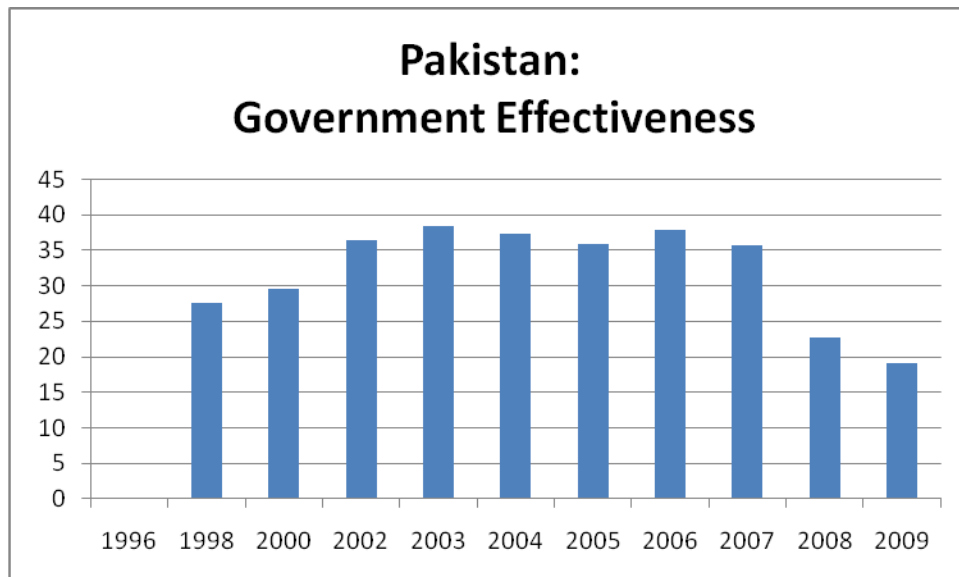


Figure 18 Political Stability and Absence of violence/Terrorism: Percentile Rank

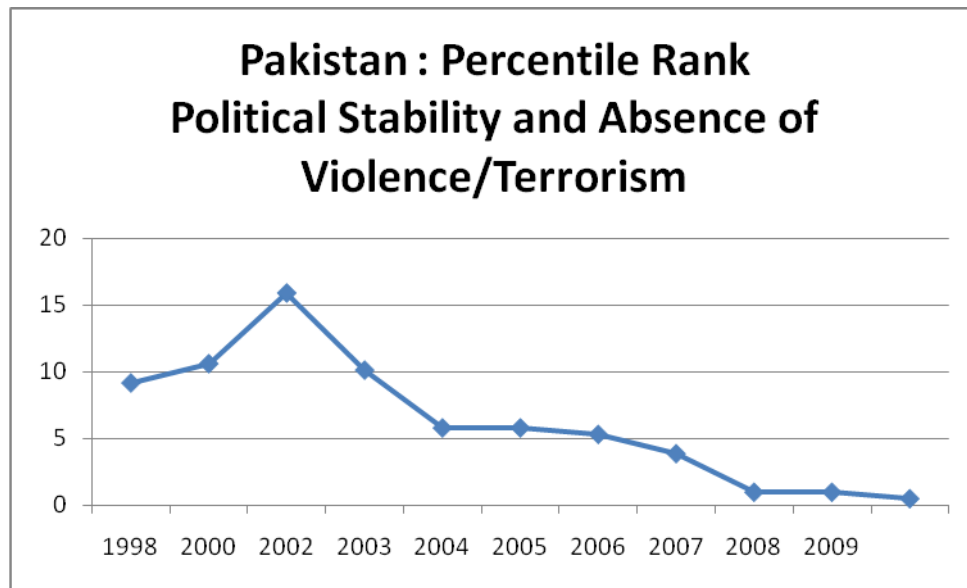


Figure 19 Regulatory Quality: Percentile Rank

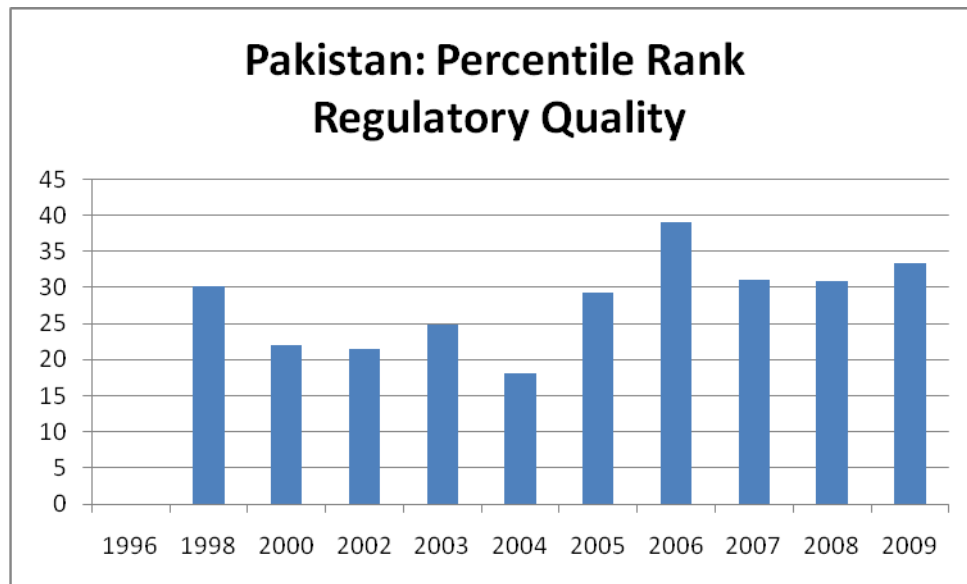


Figure 20 Rule of Law: Percentile Rank

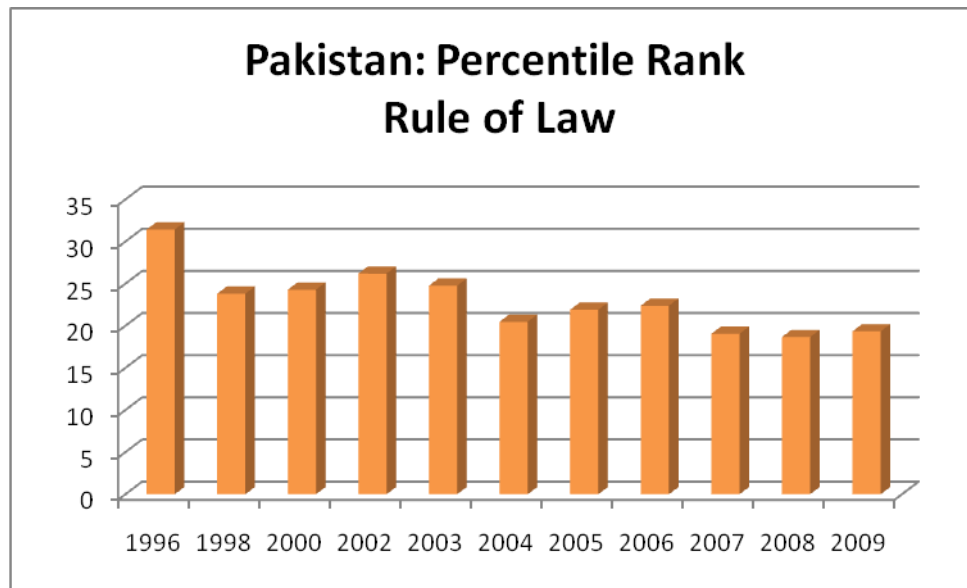


Figure 21 Voice and Accountability: Percentile Rank



## X: Appendix II

**Table 1**

USAID	Coef.	RobU.S.t Std. Err.	T	P> t	[95% Conf.	Interval]
Current Account Balance	0.078181	0.913064	0.09	0.932	-1.72758	1.88394
Net trade in goods and services	-0.42942	0.893868	-0.48	0.632	-2.19722	1.338373
Direct Investment	0.074798	0.19419	0.39	0.701	-0.30925	0.458846
Grants	3.74602	6.842851	0.55	0.585	-9.78703	17.27907
Exports	0.183808	0.155529	1.18	0.239	-0.12378	0.491396
Principal repayments on debt	0.095968	0.40705	0.24	0.814	-0.70905	0.900988
Industry	0.117625	0.241166	0.49	0.627	-0.35933	0.594578
GDP	-0.16869	0.160842	-1.05	0.296	-0.48679	0.149405
Crop Production Index	-0.03437	0.131156	-0.26	0.794	-0.29376	0.225016
Food Production Index	-0.07025	0.158141	-0.44	0.658	-0.38301	0.2425
Direct investment (% of GDP)	-1.33745	3.419411	-0.39	0.696	-8.09999	5.425095
Current Account Balance (% of GDP)	1.581401	1.014006	1.56	0.121	-0.42399	3.586794
External debt ( % of GNI)	-0.06357	0.113483	-0.56	0.576	-0.28801	0.160862
Total Debt service( % of GNI)	-0.8921	0.766705	-1.16	0.247	-2.40841	0.624205
Public and Publicly	1.047402	0.720485	1.45	0.148	-0.3775	2.4723

Guaranteed debt						
Total reserves in months of exports	1.263795	1.455625	0.87	0.387	-1.61498	4.142572
CPI	-0.00219	0.154874	-0.01	0.989	-0.30849	0.3041
Inflation	-0.14981	0.312526	-0.48	0.632	-0.76789	0.468269
Government Consumption	-1.07987	1.186204	-0.91	0.364	-3.42581	1.266078
Life Expectancy at birth	2.459172	2.886961	0.85	0.396	-3.25035	8.168692
Population above 65	-3.0619	11.20165	-0.27	0.785	-25.2153	19.09152
Population Growth	-5.02011	13.30322	-0.38	0.706	-31.3298	21.28956
Governance	26.54239	20.5955	1.29	0.2	-14.1892	67.27396
_cons	-104.917	127.3228	-0.82	0.411	-356.722	146.8888
sigma_u	35.22182	(fraction of variance due to u_i)				
sigma_e	26.06254					
rho	0.64619					

Table 9 USAID is regressed on Economic Health, Agricultural-sector, Deficit Financing and Healthcare less Governance

USAID	Coef.	Robust Std. Err.	t	P> t	[95%Conf.Interval]	
Economic Health	0.16096	0.5482	0.29	0.77	-0.945	1.267
Agri-Sector	-5.3086	5.6299	-0.94	0.351	-16.67	6.053
Deficit Financing	-5.927	3.07087	-1.93	0.06	-12.124	0.270
Healthcare	4.10906	6.89964	0.6	0.555	-9.815	18.033
_cons	11.308	0.47234	23.94	0	10.354	12.261
sigma_u	13.1383	(fraction of variance due to u_i)				
sigma_e	20.1024					
rho	0.2993					

Table 10 USAID in billion dollars is regressed on Economic Health, Agricultural-sector, Deficit Financing and Healthcare with Governance

USAID	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
Economic Health	-0.498	0.242	-2.06	0.046	-0.987	-0.010
Agri-Sector	-0.628	2.915	-0.22	0.83	-6.519	5.263
Deficit Financing	1.215	2.884	0.42	0.676	-4.613	7.043
Healthcare	18.138	10.745	1.69	0.099	-3.578	39.854

Governance	12.485	9.138	1.37	0.179	-5.984	30.954
_cons	4.000	3.840	1.04	0.304	-3.760	11.761
sigma_u	25.378	(fraction of variance due to u_i)				
sigma_e	24.386					
rho	0.520					

Table 11 Summary Statistics for the analysis

Variable	Obs	Mean	Std. Dev.	Min	Max
year	1404	1994	7.79	1981	2007
Control of corruption percentile rank	406	33.40	18.67	0.97	77.67
Government effectiveness percentile rank	406	34.41	18.57	0.49	80.58
Political stability and absence of violence percentile rank	436	35.72	24.06	0.48	98.56
Rule of law percentile rank	449	34.80	20.22	0.48	77.14
Regulatory quality percentile rank	404	33.40	17.16	0.98	76.58
Voice and accountability percentile rank	457	36.82	21.90	.48	93.30
Crop production index	1325	94.58	38.11	32	462
Food production index	1314	91.85	32.06	27	462
Foreign Direct investment % of GDP, net outflows	491	0.20	0.73	-1.40	12.77
Net trade in goods and services	1102	3.00E+08	1.29E+10	-3.87E+10	3.07E+11
Foreign Direct investment (BoP)	993	1.21E+09	6.49E+09	-4.55E+09	1.21E+11
Grants	1193	2.11E+08	4.88E+08	120000	1.14E+10
External debt stocks (% of GNI)	1095	79.95	100.55	0.28	1210.06
Total debt service % of GNI	1094	6.27	6.32	0.00	107.37
Total reserves in months of exports	1053	3.30	2.51	0.03	17.26
CPI	1323	47.97	38.52	0	127.45



General government expenditure (% of GDP)	1101	16.20	7.75	1.38	58.31
Industry value added	1107	1.75E+10	8.01E+10	2609835	1.20E+12
GDP	1273	4.30E+10	1.67E+11	4.04E+7	2.46E+12
Life expectancy at birth	1353	62.60	7.72	36.32	76.04
Population at 65 and above (% of total)	1350	4.35	2.19	1.89	16.16
Population growth (annual %)	1404	1.92	1.24	-2.40	11.18
U.S. Aid (constant dollars) dependant variable	1404	53.02	309.25	0	8147.10
Country_id	1404	26.5	15.01	1	52
Good Governance	388	3.20E-10	0.97	-1.84	2.02